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REMARKS

Applicant gratefully acknowledges that the examiner has withdrawn the rejection under 35 USC 112, first paragraph and has withdrawn the rejections under 35 USC 103 based on Balakrishnan.

Claims 104 stand rejected under 35 USC 103 over Haskell et al in view of Zhu et al.

Applicant's invention is concerned with improving the utilization of a channel having a fixed capacity in terms of bit rate to deliver a variable rate program, where the program has a maximum bit rate that exceeds the capacity of the channel. Generally, if a variable bit rate program is impressed on a channel and the maximum bit rate of the program exceeds the capacity of the channel, data will be lost. In accordance with the invention, as defined in claim 1, loading of the picture into the smoothing buffer commences a specified amount of time prior to the time indicated by the picture's decode timestamp. The picture is then transferred from the smoothing buffer at the time indicated by the decode timestamp.

The examiner suggests that the video data buffer 202 shown in FIG. 2 of Haskell et al is an apt counterpart for the smoothing buffer referred to in claim 1. Applicant respectfully disagrees. It appears that the video data buffer 202 of Haskell et al is the 1.8 megabyte decoder buffer that is assumed by the MPEG standard to be present in an MPEG compliant decoder. The decoder buffer receive a picture at a constant bit rate and holds the picture until its decode time stamp, whereupon the picture is instantaneously removed from the buffer and supplied to the decoder for decoding. This mode of operation is consistent with the description of the video data buffer in the paragraph starting at column 5, line 4 of Haskell et al. Since the present invention is based on the assumption that the program has a variable bit rate, it is evident that the video data buffer 202 of Haskell et al, which receives pictures at a constant bit rate, is not an apt counterpart of the smoothing buffer of claim 1.

Haskell et al teaches that the buffer is used to recover timing information. In accordance with the disclosure of Haskell et al, the pictures are supplied to the video data buffer 202 from the data channel via the system decoder and SCR extractor 201. Haskell et al does not disclose or suggest that loading of the picture into the

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video data buffer 202 should be commenced any time other than the time at which the data channel supplies the picture to the buffer.

Zhu et al does not supply the deficiency in the disclosure of Haskell et al. Although Zhu et al discloses a buffer, Zhu et al is concerned with jitter reduction as opposed to applicant's goal of optimizing use of a fixed capacity channel.

In view of the foregoing, applicant submits that claim 1 is patentable over Haskell et al in view of Zhu et al. It follows that the dependent claims 2-3 also are patentable.

Claim 4 is similar in scope to claim 1 except that claim 4 specifies the action that is taken if a picture becomes available later than the specified amount of time prior to the picture's decode timestamp. Applicant therefore submits that the foregoing arguments in support of claim 1 are equally applicable to claim 4. Accordingly, claim 4 is patentable over Haskell et al in view of Zhu et al.

Respectfully submitted,




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